

REMARKS

Claims 1-44 are now pending in the application. The second occurrence of claim 31 have been changed to new claim 44. Claim 36 has been amended herein to correct a typographical error (i.e., delete one of two periods). Favorable reconsideration of the application, as amended, is respectfully requested.

I. ALLOWABLE SUBJECT MATTER

Applicants acknowledge with appreciation the allowance of claim 36. Applicants believe that other pending claims (i.e., claims 1-35, and 37-44) are also in condition for allowance for at least the reasons set forth below.

II. OBJECTION OF CLAIM 31

Claim 31 stands objected to due to duplicate use of the same ordering number. The second occurrence of claim 31 has been canceled, and added as new claim 44 herein. Withdrawal of the objection is respectfully requested.

III. REJECTIONS OF CLAIMS 1-35 AND 37-43 UNDER 35 U.S.C. § 103

Claims 1-6, 8-15, 17-24, 26-35, and 37-42 stand rejected under 35 U.S.C. § 103 based on a combination of U.S. Patent No. 5,473,599 (Li) and U.S. Patent No. 6,512,774 (Vepa). Claims 7, 16, 25, second claim 31, and 43 stand rejected under 35 U.S.C. § 103 based on a combination of Li, Vepa, and U.S. Patent Publication No. 2002/0120697 (Generous). All pending claims are believed to be allowable for at least the following reasons. Essentially, it is not seen how the ARP features of the independent claims are taught by Li or how either reference suggests linking the ARP protocol to load balancing. Withdrawal of the rejection is respectfully requested.

The present invention as recited in independent claims 1, 8, 10, 17, 19, 26, 32, 34, 36, and 37 is directed to providing gateway services to hosts. Most of these claims recite load balancing gateway services. Independent claim 1 requires, *inter alia*, "receiving an ARP message from a host addressed to an address shared by a plurality of gateway devices available for serving the hosts on the network segment." Other independent claims 10, 19, 26, 34, and 37 contain recitations similar to those of independent claim 1.

Independent claim 8 requires, *inter alia*, "receiving an ARP message from a host" and "replying to the ARP message with a reply message identifying the addressee gateway device," which gateway device was selected based on load balancing considerations. Other independent claims 17, and 32 contain recitations related to those of independent claim 8.

Paraphrasing, CLAIMS 1, 8, 17, 32 all require the following combination: receiving an ARP message from a host, load balancing to select a gateway device to act as an addressee gateway for the host, and informing the host of the selected gateway device using an ARP reply. No cited reference employs an ARP mechanism for triggering load balancing selection and/or using an ARP reply to deliver the selected information. Further, no combination of the cited references suggests that ARP could or should be integrated with a load balancing algorithm.

CLAIM 1 additionally requires "*receiving an ARP message from a host addressed to an address shared by a plurality of gateway devices* available for serving the hosts on the network segment." Nothing in the cited references suggests this features.

The Li patent was cited as allegedly describing receiving an ARP message from a host. The Office Action specifically cites column 6, lines 40-57 of Li, stating "[i]n Li one of the routers R4-R7 of the group or routers 126-fig. 2b assumes the state of active router receives an ARP messages from host H2-fig. 2b". However, this cited portion of Li fails to teach or suggest use of ARP messages. Certainly nothing in the description or associated figures suggests that an ARP message is received at one of the routers as suggested by the Action. The cited portions merely explain that one of the routers assumes the state of an active router. Possibly, the Office assumes that sending an ARP message is somehow implicit in the cited section. However, this reads too much into the section. All that is stated in the cited passage of Li is that "the host is configured to point to virtual router R4." There are many ways to configure a host (including hard coding) and it is not seen how the cited section specifically suggests receiving an ARP message. The examiner is invited to explain how the cited portions of Li suggest receiving an ARP message from a host. It is respectfully submitted that nothing in the cited portion suggests receiving an ARP message from a host. Therefore, the cited portion of Li cannot be said to disclose the above-identified claimed feature of recited in independent claims 1, 8, 10, 17, 19, 26, 32, 34, 36, and 37. Note that while it is not germane to this analysis, the Li patent may well provide coverage that dominates such embodiments.

Regarding the claim limitation *replying to the ARP messages with a reply message identifying the addressee gateway device*, the Action made the following reference to Li:

the assumed active router R4-fig.2b of the group router 126-fig. 2b
replies to the ARP message by identifying a shared virtual address
gateway device, see col. 4, lines 33-44.

Again, the cited material makes no mention of ARP and no ARP reply message can be seen to be reasonably suggested. The Office is invited to explain how an ARP reply message is implicit in this discussion.

The shared virtual address was identified by load balancing as recited in other elements of, e.g., claim 8. The Action relies on Vepa to provide the load balancing aspect of the claims. While

Vepa does describe load balancing among network interface cards in a server, there is nothing to suggest that one might want to tie such load balancing operation with an ARP protocol or any other gateway address discovery protocol. Vepa's load balancing occurs when an outgoing data packet (from a server) is detected by a software element in the server (column 9, lines 33-37). See also, column 10, lines 64-65. In general, the Vepa and Generous patents have been carefully reviewed and found not to cure the deficiencies of the Li patent.

The Generous patent was cited as describing classification of failures. However, nothing in the Generous patent suggests the above-identified claimed features of the invention.

With the exception of claim 34, all independent claims at issue recite, generally speaking, an operation or methodology for replying to an ARP message with the identity of a gateway device selected based on load balancing considerations. As explained above, use of the ARP protocol in this manner is not disclosed or suggested by the cited references, alone or in combination. Claim 34 specifies that a gateway device responds to an ARP message by sending a reply message identifying an addressee gateway device, without specifying that the gateway device is identified by load balancing considerations. Nonetheless, it is believed that this claim is patentable over the cited art, given the art's limited teachings of applying the ARP protocol.

In view of the foregoing, the invention defined in independent claims 1, 8, 10, 17, 19, 26, 32, 34, 36, and 37, and their dependent claims is believed to be patentable over the cited art. Withdrawal of the rejections is respectfully requested.

IV. CONCLUSION

Applicants believe that all pending claims are in condition for allowance and respectfully request a Notice of Allowance at an early date. If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 510-663-1100, ext. 245.

Respectfully submitted,
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Limited Recognition under 37 CFR § 10.9(b)

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